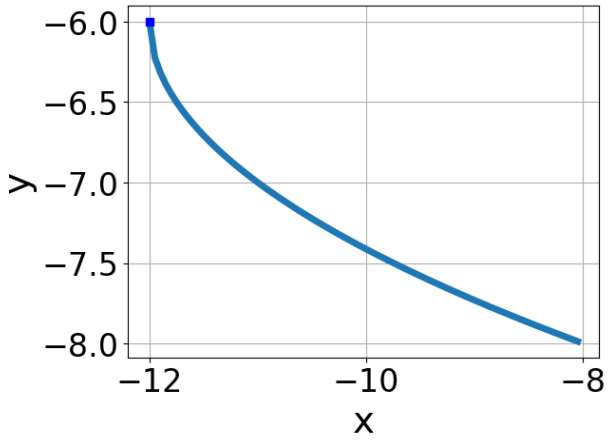
1. Choose the equation of the function graphed below.



A. $f(x) = \sqrt{x - 12} - 6$

B. $f(x) = -\sqrt{x - 12} - 6$

C. $f(x) = \sqrt{x + 12} - 6$

D. $f(x) = -\sqrt{x + 12} - 6$

E. None of the above

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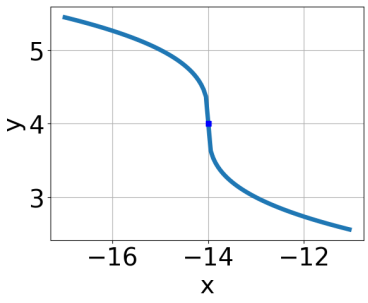
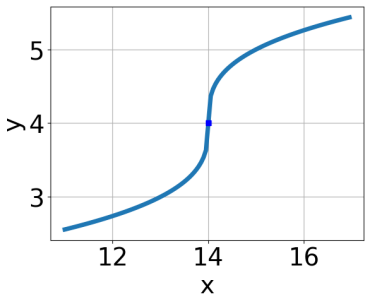
2. Choose the graph of the equation below.

$$f(x) = -\sqrt[3]{x + 14} + 4$$

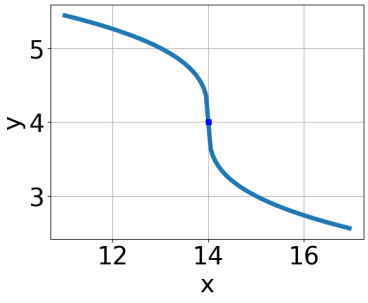
A.



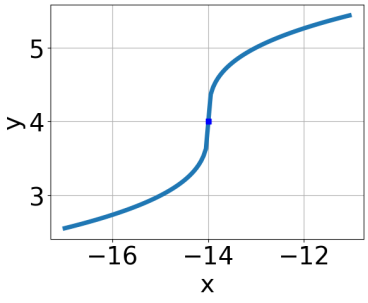
C.



B.



D.



E. None of the above.

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3. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-40x^2+8}-\sqrt{-4x}=0$$

A. All solutions lead to invalid or complex values in the equation.

B. $x \in [0.42, 0.5]$

C. $x \in [-0.56, -0.3]$

D. $x_1 \in [-0.56, -0.3]$ and $x_2 \in [-5.5, 4.5]$

E. $x_1 \in [0.35, 0.45]$ and $x_2 \in [-5.5, 4.5]$

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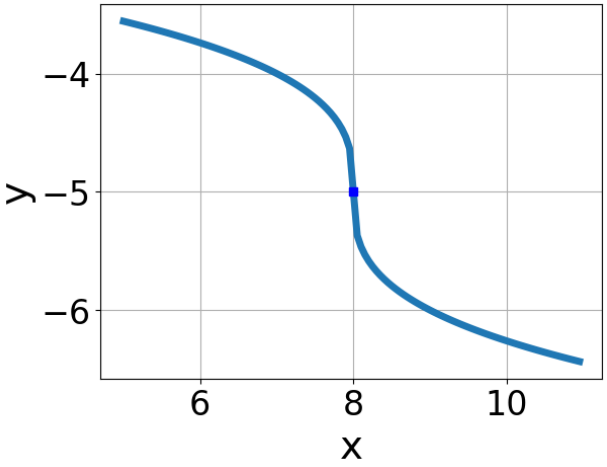
4. Choose the equation of the function graphed below.



A. $f(x)=\sqrt[3]{x-8}-5$

B. $f(x)=\sqrt[3]{x+8}-5$

C. $f(x)=-\sqrt[3]{x-8}-5$

D. $f(x)=-\sqrt[3]{x+8}-5$

E. None of the above

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5. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{10x^2 + 45} - \sqrt{-55x} = 0$$

A. All solutions lead to invalid or complex values in the equation.

B. $x \in [-5.6, -3.1]$

C. $x \in [-1.1, 0.1]$

D. $x_1 \in [-5.6, -3.1]$ and $x_2 \in [-4, 1]$

E. $x_1 \in [0.2, 1.3]$ and $x_2 \in [0.5, 6.5]$

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6. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-4x - 8} - \sqrt{5x - 6} = 0$$

A. $x \in [-0.92, 1.18]$

B. $x_1 \in [-2.87, -1.88]$ and $x_2 \in [1, 2.4]$

C. $x \in [-1.86, -1.48]$

D. All solutions lead to invalid or complex values in the equation.

E. $x_1 \in [-2.87, -1.88]$ and $x_2 \in [-0.9, 0.9]$

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7. What is the domain of the function below?

$$f(x) = \sqrt[4]{-5x + 8}$$

A. $[a, \infty)$, where $a \in [0, 1]$

B. $(-\infty, a]$, where $a \in [-1.3, 1.2]$

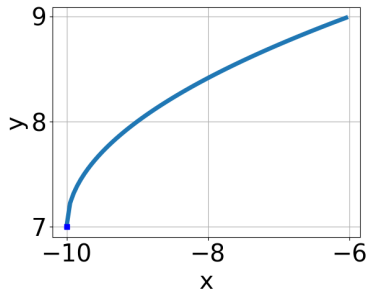
C. $(-\infty, \infty)$

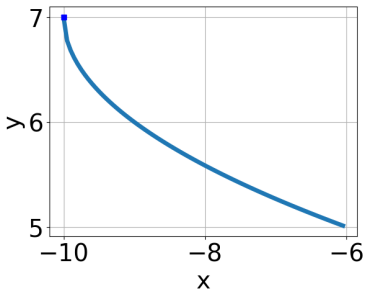
D. $(-\infty, a]$, where $a \in [1.3, 5.9]$

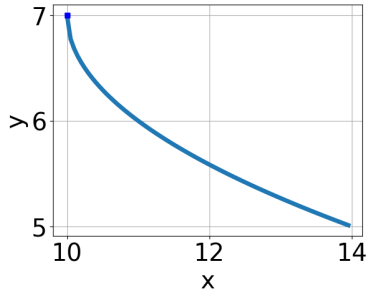
E. $[a, \infty)$, where $a \in [1.1, 4.5]$

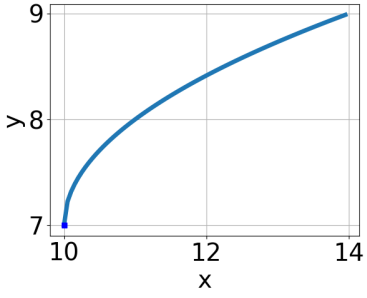
8. Choose the graph of the equation below.

$$f(x) = \sqrt{x - 10} + 7$$

A. 

C. 

B. 

D. 

E. None of the above.

9. What is the domain of the function below?

$$f(x) = \sqrt[5]{3x - 9}$$

A. The domain is $[a, \infty)$, where $a \in [0.3, 1.6]$

B. The domain is $(-\infty, a]$, where $a \in [-1.67, 2.33]$

C. The domain is $[a, \infty)$, where $a \in [1.6, 6.1]$

D. $(-\infty, \infty)$

E. The domain is $(-\infty, a]$, where $a \in [2, 5]$

10. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{9x + 8} - \sqrt{7x + 2} = 0$$

A. $x_1 \in [-3.06, -2.66]$ and $x_2 \in [-1.29, -0.58]$

B. $x \in [-3.06, -2.66]$

C. $x \in [-5.14, -3.53]$

D. All solutions lead to invalid or complex values in the equation.

E. $x_1 \in [-1.31, 0.27]$ and $x_2 \in [-0.54, 0.15]$
